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Enabling tomorrow's doctors to address obesity in a GP consultation: an action research project

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Enabling tomorrow's doctors to address obesity in a GP consultation: an action research project

Obesity is a leading risk factor for morbidity and mortality, however guidelines for prevention and management are relatively recently established, and little is known about what needs to be in place to put these into practice.

This research provides an insight into how senior medical students consult with obese patients in general practice, the range of their learning needs, and the impact of various educational strategies that aim to bring their practice closer to current evidence-based guidelines.

It centres on a series of compulsory but formative reflective case studies written by final year students at one large medical school on their GP rotation as they consult independently with obese patients with 'next room' GP tutor support.

Analysis of these case studies was used to inform a three-year educational action research project. By systematically identifying and addressing learning needs, including barriers and enablers to best practice, we have demonstrated how senior medical students, and their GP tutors, can acquire the role legitimacy and role competency required for effective practice.

Keywords: obesity, medical education, behaviour change, health promotion, primary care, general practice

Status Box

What is already known

Our clinical and educational response to obesity is less well developed than our response to other risk factors for morbidity such as smoking. There are difficulties translating behavioural change and obesity guidelines into practice, and teaching tends to be inconsistent and vicarious with little understanding of the learning needs of students or how teaching translates into clinical practice.

What this work adds

This paper gives insights into real-life encounters with obese patients providing a rich understanding of the learning needs of senior medical students. An action research methodology has been used to test approaches to addressing these needs, which have been tested in the clinical context.

Suggestions for future work and research

A follow-up study looking at patient experiences and outcomes of consultations led by healthcare professionals trained using these approaches is needed.

Introduction

Obesity and physical inactivity are recognised as leading attributable risk factors for mortality and morbidity (1), however the evidence base for treatment and recommendations for best practice are only recently established (2, 3) and there has been difficulty translating guidelines into clinical practice (4, 5) with the medical education response remaining under-developed (6, 7). There is limited literature on the learning needs of medical students and trainees in this area, and what there is tends to be self-reported or elicited through survey (8, 9) and lacks the richness of qualitative data that is based on experiences in practice.

Design and methods

Theoretical framework

A qualitative approach, based on compulsory but formative reflective accounts of student consultations with obese patients, provided insights into how students consult in 'real life' situations. The compulsory element encouraged students to engage with patients about their weight, and the formative element allowed them to articulate and reflect on their performance openly. The reflective approach illuminated the barriers, facilitators, and feelings of learners creating a complex understanding of their learning needs. An action research methodology was adopted to develop and test approaches to addressing learning needs.

Participants and setting

The study was conducted at King's College London GKT School of Medical Education, which has approximately 450 medical students in the final year, divided into three 'rotations'. The study was conducted over three years, where approximately 1300

students wrote reflective accounts on their consultations with obese patients across 100 teaching practices. At the start of this study the learning experiences of students at this medical school relevant to this study included:

- a lecture and workshop on behavioural change techniques two years prior to this rotation
- teaching on formal reflection in their first year at medical school
- a lecture-based introduction to the NICE guidelines on obesity at the start of their GP rotation

Ethics

Ethical approval was obtained for 'opt-out' consent to analyse anonymised case studies, with a maximum of 5 students per year (1%) choosing to opt out. Care was taken to remove patient, student and practice identifiers prior to analysis.

Sampling strategy

30 students' cases were randomly selected from each rotation in order to achieve a representative sample. Saturation of themes was considered to have been achieved at between 15 and 25 cases and by 30 cases in all cohorts. The large number of students in each rotation allowed the option of increasing the power of the study if needed, and performing purposeful sampling to explore outlying views or experiences in more detail. In total 305 case studies were analysed.

Data acquisition

Students were asked to write a 500 word reflective case study on an encounter with an obese patient. This formative assessment was required and used as a basis for a GP

tutorial, but did not contribute towards their final grade. Students across all cohorts were given the same instructions.

Data analysis

A descriptive analysis of the content of consultations and reflections was performed for each cohort, and selected sub groups within cohorts facilitated by NVivo 10.0 software. Thematic analysis was used to identify the learning needs of students including barriers and facilitators to best practice. These informed an iterative action research project where heuristic interventions were introduced to address these learning needs. A framework analysis (11), mapping the evolving content and themes across cohorts and groups in response to teaching interventions, was used to assess the impact of teaching interventions. From this an overarching analysis was undertaken to describe and explain what needs to be in place so that tomorrow's doctors are able to apply best evidence when consulting with obese patients.

The content of consultations was double coded by two researchers, cross-checked and arranged under the following broad categories, relating to the stages of a standard brief behaviour change intervention (10, Table 1). Reflections were independently coded by two researchers as paraphrased statements and were combined without pruning, merging clearly related statements where appropriate. Then there followed a process of grouping under broad themes with subdivisions relating to areas of interest such as the usefulness or otherwise of teaching interventions, and barriers and facilitators to effective practice.

Table 1: Framework for content analysis based on the 6As framework for a brief behaviour-change intervention, adapted from Glasgow (10)

- Ask: how the subject was broached (e.g., “broached by student”)
- Assess: what was included in the history and examination (e.g., “barriers to exercise given”, “BMI measured”)
- Advise: information giving (e.g., “generic dietary advice given”)
- Agree: goals, action plans and problem solving (e.g., “patient agreed to specific dietary changes”, “target for weight loss agreed”)
- Assist: supporting patients with resources (e.g., “leaflet offered”, “food diary printed and given”, “website recommended”, “orlistat prescribed”)
- Arranging follow-up or referral (e.g., “referral to practice nurse made”, “follow-up arranged with student in 2 weeks”)

Results

The default consultation

The initial analysis showed fear of causing offence as a major barrier to broaching the topic, with students seeing their role as treating morbidity rather than addressing the health behaviours or underlying determinants of health. Students preferred to wait until patients broached the topic themselves and to refer patients to the practice nurse or dietician rather than address the issue directly. Advice, when it was offered, was typically generic, simply telling patients to lose weight, or to exercise more or eat less. Students tended to offer prescriptive advice rather than use evidence-based behaviour change techniques. Patient-expressed barriers to weight loss, such as an inability to exercise due to knee pain, tended to be acknowledged without problem solving. Students were more comfortable talking about exercise and rarely took a dietary history or talked about dietary change. Only one student in the first cohort negotiated a goal and action plan including problem solving with follow-up. The patient’s BMI was often the only piece of information that students sought from patients before giving advice.

Reflections included some judgemental attitudes mixed with despondency regarding patients' perceived inability to control their own behaviours and at the ineffectiveness of interventions and treatments. Experiences with patients who did not lose weight added to this despondency. Senior role modelling was mixed but appeared to have a profound effect, both positive and negative, on students' sense of 'role legitimacy', illustrated in Figure 1. Students understood the rationale for addressing obesity before morbidity sets is, particularly in children and young adults, but felt that they lacked the knowledge and skills to facilitate this. There was an appreciation of the underlying social determinants of health, such as poverty, social norms, and the availability of inexpensive calorie-dense food, but a sense of helplessness at how to address them. Knowledge and availability of resources, including patient information leaflets, local referral options and services, correlated positively with students' willingness to broach the topic. Time was acknowledged as a barrier to effective health promotion, but few students offered their patients specific appointments to discuss their health further. Other learning needs included:

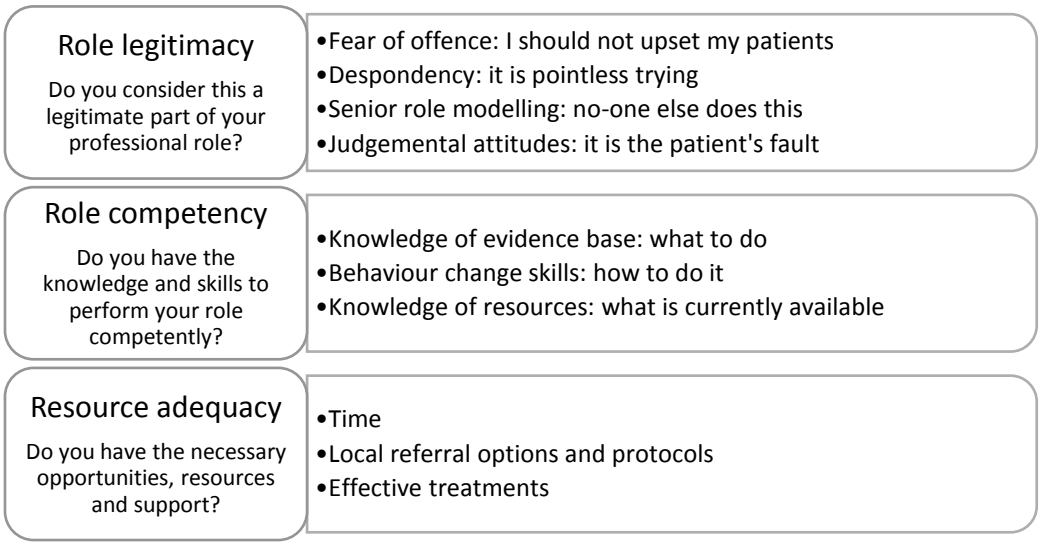
- how to address binge-eating disorder
- the importance of dietary change over exercise for weight-loss
- recognising and addressing secondary causes of weight-gain
- addressing associated pathologies (e.g. hypertension)
- how and when to escalate up the treatment pathway.

Barriers and enablers to effective practice

Thematic analysis of these early consultations revealed barriers and enablers to effective practice (Figure 1). Following the example of Nolan (4) we have categorised these according to an adaptation of Shaw's concepts of role legitimacy and role competency

(12), with resource adequacy identified as a third necessity for effective practice. Role legitimacy is of primary concern, as without feeling that it is the doctors' role to address obesity, students are unlikely to attempt a behavioural change intervention.

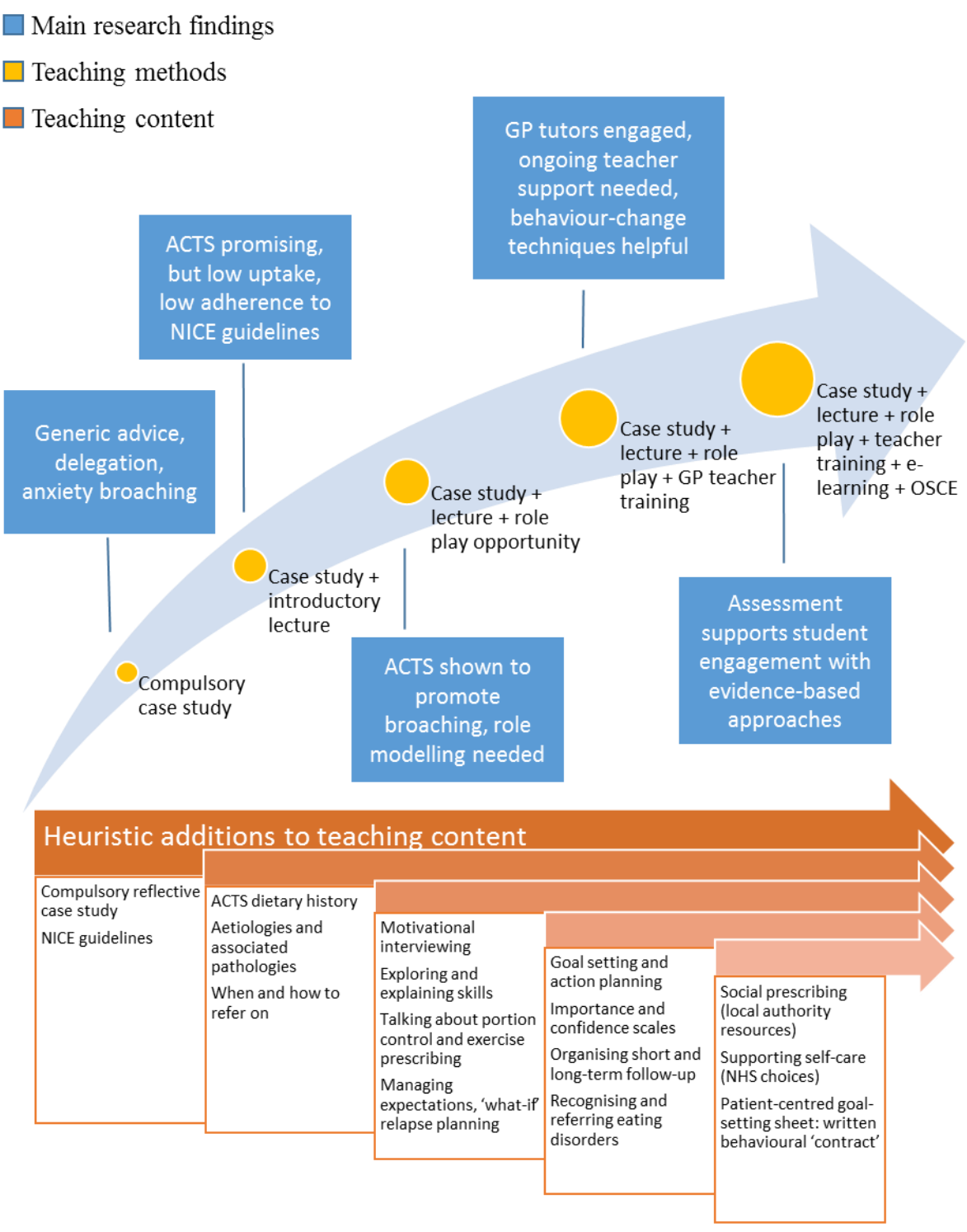
Figure 1: Barriers and enablers to effective practice



Action research

The following interventions were introduced in an action research cycle to address role legitimacy and role competency. These are presented alongside the main findings from the data analysis to illustrate the impact of each intervention. A summary research trajectory is presented in Figure 2.

Figure 2: Summary research trajectory 2012 - 15



Addressing role legitimacy

Students expressed difficulty broaching the subject of obesity, despite understanding its relevance to health:

> 'I approached the consultation with consternation. I'm accustomed to discussing people's smoking habits but confronting their weight is not something I felt very comfortable doing and have very little experience in.'

To address this, the ACTS framework for taking a dietary history (Table 2) was introduced, as it contains a patient-centred method of broaching the subject: 'asking to ask', and encourages the patient to give relevant information before a plan is agreed.

Table 2: ACTS framework for eliciting a dietary history, courtesy of Professor P. Booton

A = ask to ask "Can I ask you about your weight?"
C = concerns "Do you have any concerns about your weight?"
T = typical diet "Can you take me through a typical day's food and drink?"
S = special requirements "Do you eat a special diet?"

Students that used this framework reported finding the questions natural and easy to use, however, uptake was low until role-play opportunities were provided and feedback from previous cohorts was presented.

> 'We had recently been lectured on brief interventions in weight management, using the ACTS concept… We had previously practised this method, which seemed to work well, so I was quite confident to try this approach with this patient.'

In the current cohort, the majority of students are now using this framework and it continues to be seen as successful, though the final question on special requirements does not appear to be used. GP tutors attending the training workshop reported that this framework and its broaching question 'asking to ask' was the most helpful learning point from the day. Students reported the patient-centred opening questions as particularly helpful, and that patients responded to them positively.

> 'I opened up the conversation with the question "may I ask you about your weight?" which was suggested in one of the campus block lectures and felt really easy and appropriate to use. She replied with a very enthusiastic "yes!" which showed her willingness to address her weight and, perhaps, relief at being asked and helped.'

The use of this framework had a positive impact on students' experience broaching conversations about weight with patients, with students who had broached it successfully once feeling more confident in broaching the topic again in the future.

> 'I found that bringing up the topic of her weight was fairly easy. Something as simple as opening up by asking if they'd like to talk about their weight seemed to get the conversation started… I believe that this encounter has given me the confidence to go through something like this again. I found it particularly useful to use the ACTS dietary history to guide me through the consultation.'

Improving senior role modelling

Student learning is influenced not only by what is formally and informally taught, but also by what is learnt in terms of culture, values and behaviours (13). The influence of GP teachers' attitudes and behaviours on students' willingness to address obesity in a consultation appears to be strong, with both positive and negative influences observed.

> ‘My GP tutor manages to be very non-judgemental and matter-of-fact….I have never yet seen a patient get upset… I was so impressed by the approach… next time… I am going to practice similar non-judgemental but direct tactics.’

> ‘During my first couple of weeks of GP placement, while observing the GP, I was pleasantly surprised… during a 3-hour morning surgery, weight issues were raised with 5 patients...’

> ‘During my first week at my practice sitting in clinics I did not see my GP discuss weight... I have not discussed weight with many patients either…I therefore talk about weight only when a patient requests help...’

As obesity is a relatively modern-day health problem many GP tutors will have qualified without formal training on this topic, and may not themselves be trained in behaviour change techniques. Our research indicates there is a case for training to be offered to GP tutors in parallel with students.

To address this, a training day was provided for 60 GP tutors. Pre-and post-training questionnaires revealed that the learning needs of GP tutors were not dissimilar to those of their students, with lack of time and incentives cited as additional barriers. An e-learning module has been developed for ongoing tutor support.

Addressing judgemental attitudes

Early cohorts showed that some students expressed feelings of frustration, paternalism or judgement, blaming obesity on the apathy of their patients, or failure to ‘comply’ with treatment regimens.

> ‘…how frustrating it can be for the people involved in care with patients who have diabetes because so much of their outcomes depend on the will and volition

> to stop detrimental health behaviours such as continuing to eat chocolate every day and taking regular exercise'

> 'I personally find it frustrating to advise patients on the risk factors of obesity if they feel apathetic or are not willing to improve.'

The pre-rotation lecture was modified to include teaching on the social, psychological, cultural, environmental, genetic, and secondary causes of obesity, including data on the changing food environment, the relationship between complex childhood trauma and obesity, and sociocultural contexts such as associations between weight, health and wealth, in some communities. The small number of judgemental comments in the first cohort were not expressed in subsequent cohorts.

Addressing despondent attitudes

The initial analysis highlighted despondent attitudes driven by media reporting of research on the effectiveness of behavioural change interventions for obesity, and experiences consulting with patients who did not change their behaviour despite advice.

Students were asked to compare the health impacts for commonly accepted interventions, such as prescribing statins or cervical screening, with the potential health impacts of weight-loss if even a small proportion of patients manage to lose a small amount of weight. An illustrative scenario was given where approximately 1 in 12 patients respond to brief advice, and approximately 1 in 5 respond to more intensive behavioural change support (15) and where a 5 point reduction in BMI results in a 30% fall in all-cause mortality (16).

Students were reminded that many negative reports on the efficacy of interventions aggregate weight-loss over all participants, whereas studies that look at the proportion of patients that achieve a clinically significant amount of weight-loss are

more encouraging. Students continued to be disappointed by low 'success' rates, but understood the need for resilience and perseverance.

> 'This initially made me want to not try any more, that it is pointless, but my role is to help and in reminding myself how difficult it is to lose weight. I am reassured that every bit of support, irrespective of the outcome is worth it, just in case it helps somebody take steps in the right direction.'

Improving behaviour change skills

After role legitimacy was addressed, behaviour change skills were identified as the next most significant bottleneck to good practice. Teaching was informed by the NICE guidelines on behavioural change (17) and included motivational interviewing theory and scripts, a peer-to-peer exercise agreeing and recording SMART goals (18) with importance scales, agreeing action plans with confidence scales, ideas for supporting self-management through social strategies, and emphasis on the necessity for short-term and long-term follow-up. Students were given lecture-based teaching, with role play opportunities and an optional e-learning module to complete (19); additionally a behaviour change OSCE has been included in their finals.

Supporting knowledge of evidence base

Students were given a brief summary of the NICE guidelines on obesity and encouraged to explore and use the NICE online clinical pathway (20) including biomedical assessment and management options. Students were given guidance on binge-eating disorders and secondary causes of obesity. Students were also shown how exercise on its own is ineffective for weight-loss (21, 22) which was illustrated by comparing the calories burned in an hour's high intensity exercise with different meal options from a well-known fast food chain.

When this teaching was first introduced there was a significant drop in the number of students mentioning exercise as a recommendation in their essays. This was rectified by reminding students that a three-pronged approach (improved quality of diet, reduced calorie intake, and reduced inactivity) should be encouraged where appropriate, emphasising their independent health benefits.

Most students referred to NICE guidelines in their reflective case studies, comparing what they had done against the guidelines. Students were comfortable discussing Orlistat and gastric surgery with patients, though only one student initiated a step-up in care that was not specifically requested by the patient.

Supporting knowledge and use of resources

Students were encouraged to acknowledge and address the social determinants of health where appropriate, and received lecture-based teaching on social prescribing, with guidance on finding and evaluating local authority and other prescribing resources, such as health trainers, walking groups and cooking classes. GP tutors were given a directory of obesity-related social prescribing resources at their training day.

> 'My GP tutor explained to me that he went on an Obesity Management course organised by [the medical school]. This course provided him with information about services to which overweight patients can be referred in the local area, and since he has had this knowledge, one service which teaches people to cook in a more healthy way, has gone from being on the brink of closing to being oversubscribed.'

The engaged consultation

Students in the most recent cohorts showed strong evidence of engagement with evidence-based behaviour change techniques, which they applied in a patient-centred

manner. Table 3 shows examples of engaged consultations from the 2014-15 cohort.

Table 3: Examples of evidenced, patient-centred student consultations 2014-15

> 'I have seen Miss. C on 2 occasions subsequently and am delighted to report that she has lost 12 lbs so far. She remains highly motivated by positive reinforcement of her weight loss; keeps a food diary and attends Weight Watchers weekly.'
>
> 'One of the important points I took away from the guidelines was ensuring that plans are tailored to individual preferences so that goals are easily achievable…we set plans for losing 1.5 stone by March.'
>
> 'I thus contacted MF by phone a few weeks after meeting her at the surgery, and enquired if she has made any changes to her diet or lifestyle… She said she plans to enquire about attending at a different location on a different day. We agreed that this was a good plan and I wished her luck with achieving her goal of losing weight.'
>
> 'I reviewed PG after 2 weeks and gave him all the advice I had researched. I was also pleased to see he had lost 1 Kg in weight during this time by implementing some of the changes we had agreed on... considering that for the last several years his weight had been steadily increasing, I felt that I could take some small degree of victory from this case.'

Strengths and limitations

The strength of this study is its insights into genuine patient encounters, and the longitudinal element, allowing responses to teaching to be assessed. There is an inherent weakness to the action research methodology, in that the researcher inevitably has a stake in the success of the research. This has been mitigated by the use of second coders and reflective discussions with a mentor. This study does not address the question of patient impact, although several students in later cohorts followed up their patients

within the rotation and reported successes.

Discussion and conclusions

This paper highlights the potential for improvement on the default 'you need to lose weight' consultation by systematically assessing and addressing GP and student learning needs. In order to address the embarrassment that students feel in raising this topic with patients, specific strategies for broaching obesity are needed, supported with both role play and practice-based learning opportunities. The learning needs of GP tutors should be supported alongside their students so that a consistent approach is modelled. Confidence increases where students have successfully broached the topic and experienced a productive discussion with a patient, but there is a need to address the expectations of both patients and health professionals such that they appreciate the significance of a modest success rate. Generic behaviour-change skills may be successfully introduced through lecture, role play, e-learning and practice-based opportunities and assessed through practical examinations. A compulsory formative reflective essay helps to ensure that students follow-up their campus-based learning with practice-based experiences, and allows the teacher to assess and respond to their students' learning needs.

Ethical approval

This research was conducted in an ethical and responsible manner with the approval of the Research Ethics Committee of King's College London (BDM/11/12–57).

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Disclosure statement

No potential conflict of interest was reported by the authors.

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